

Flightfax

ARMY AVIATION
RISK-MANAGEMENT
INFORMATION

MARCH 2004 ♦ VOL 32 ♦ NO 3



DES

Relevant and *Ready*

Flightfax

ARMY AVIATION
RISK-MANAGEMENT
INFORMATION

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Page 6



Page 12



Page 18



CONTENTS

DASAF's Corner

Lessons Noted, or Lessons Learned? 3-4
USAAVNC Commander Sends 5

Lead Story

DES—Relevant and Ready 6-9
Commander's Task List:
The Other Option 10
STACOM Messages (Feb 04) 11
Aviation Door Gunnery 12-13
When the Minimums Become
the Maximums 14-16

Investigator's Forum

Aviation Maintenance Can Be Deadly 17-18
Fighting Brownout With Simulation 18-19

War Stories

If It'll Fit, It'll Fly! 20-21
Parker Awards:
Spotlighting Safety Excellence 22-23

Accident Briefs 24

POV FATALITIES

through 31 January

FY04

29

FY03

31

3-yr Avg

31

Flightfax is published by the U.S. Army Safety Center, Building 4905, Fifth Avenue, Fort Rucker, Alabama 36362-5363. Questions about the editorial issues addressed in *Flightfax* should be directed to the editor at DSN 558-9855 (334-255-9855) or flightfax@safetycenter.army.mil. Distribution questions should be directed to Media and Marketing at DSN 558-2062 (334- 255-2062).

Joe Smith
JOSEPH A. SMITH
Brigadier General, U.S. Army
Commanding



Lessons Noted, or Lessons Learned?

We are an Army at war. We have great pride in our Soldiers, for they are the centerpiece of our formations. They clearly are the critical component to our combat readiness. Each and every Soldier is special—a father, son, mother, or daughter. These men and women are expensive to train and important to our success in the Global War on Terrorism.

As a team, we must pay close attention to lessons learned from preventable accidents to protect our fighting ability and win our Nation's wars. **However, if these lessons are noted rather than learned, we'll continue to pay the price and lose Soldiers unnecessarily.**

As your Director of Army Safety, I personally receive an e-mail every time a Soldier is killed in an accident. I find it sobering that rarely is there a new kind of fatal accident, just a different name in the report. We continue to lose Soldiers to the same mistakes over and over: falling asleep while driving, vehicle rollovers caused by speeding, driving without seatbelts, improper handling of unexploded ordnance, negligent discharges due to poor muzzle awareness, and failure to perform proper weapons clearing procedures. On the aviation side, brownouts and poor crew coordination continue to rear their deadly heads.

Knowing these hazards cause 80 percent of all our accident fatalities, one could ask the question, "Are we actively learning from our mistakes and successes, or are we just noting them?" From statistical analysis and visits throughout our Army, I'm concerned that we might be doing too much of the latter. I'll give an example.

I recently visited an aviation unit that had experienced a Class A accident a couple of months before. The accident was caused by a compilation of errors including poor crew selection, poor crew coordination, failure of the crew to mark known hazards on their maps, failure to perform proper reconnaissance, and failure of the leadership to give a proper mission brief. These are all mistakes we can learn from. However, when I asked the battalion staff if their crews had been briefed on the details of the accident, I was shocked to hear that the answer was "No!" A small part of the battalion leadership had been briefed, but the line pilots and Soldiers flying the missions every day had not. Lessons noted—**not** lessons learned.

It's critical that we share our experiences now more than ever. Over the next 4 months we'll have more than 250,000 Soldiers on the move, and we'll conduct a 120,000-Soldier battle handover for OIF-2 alone. Our deployed Soldiers have gained invaluable experience and insight, including the development of standing operating procedures (SOPs) that have reduced brownout-induced Class A accidents from 75 percent in Fiscal Year 2003 to 11 percent this year. I ask these successful units to consider a couple of questions. Have you put your new SOPs and tactics, techniques, and procedures in writing so they become institutional knowledge? If so, have you

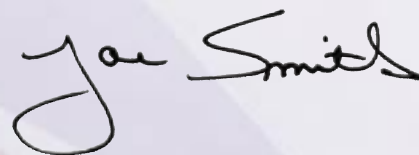
actively provided those documents to your replacing unit **and** the Army as a whole so your experiences can be turned into better training for all follow-on units?

Clearly, your transition home will provide different challenges than those you left overseas. What are you doing to transition your risk management thought process? Once the enemy was the biggest risk, but now it will be privately owned vehicles (POVs). Over the last 10 years, POV fatalities have accounted for 56 percent of accidental deaths in the Army. It's hard to imagine returning home safe from a combat zone only to lose a buddy to a POV accident. Don't be the one to lose your battle buddy.

Here at the Safety Center, we continue to provide you information through our Web-based tools and written publications. Check us out on the Web! You'll be surprised at how easy it is to collect information that applies directly to your unit and location. Try out the ASMIS-1 POV module to help you plan and reduce risk while traveling. Until these tools are put to use, the Army's detailed knowledge of accidents will be just lessons noted.

Ensure you turn your own experiences into institutional knowledge. If you have a success story or experience the Army can learn from, send it to us at warstories@safetycenter.army.mil. Allow us to turn lessons noted into lessons learned.



Keep your leader lights on!



Joe Smith



We continue to lose Soldiers to the same mistakes **OVER & OVER:**

- ☒ Falling asleep while driving
 - ☒ Vehicle rollovers caused by speeding
 - ☒ Driving without seatbelts
 - ☒ Improper handling of unexploded ordnance
 - ☒ Negligent discharges due to poor muzzle awareness
 - ☒ Failure to perform proper weapons clearing procedures
 - ☒ Brownouts and poor crew coordination
- 
- 

Are we actively learning from our mistakes & successes?



USAAVNC

Commander Sends...

As we reshape Army Aviation to meet the needs of the field as we fight the Global War on Terrorism, there is no better place to start than at the Army Aviation Warfighting Center in Fort Rucker, AL. In this issue of *Flightfax*, we will touch on one of the changes we have made to assist field commanders. The following article will explain the new mission given to the Directorate of Evaluation and Standardization (DES) so they can meet the demands of our deployed forces. Scheduled visits are a thing of the past. Now DES will task-organize their team to fit your schedule and your needs as you prepare to deploy or return from a deployment. I hope you like what you read as we educate you on DES' new role in supporting our branch.

Above the Best!

BG E.J. Sinclair
Commanding General
U.S. Army Aviation Center



DES

Relevant and Ready

CPT Thad Fineran
Directorate of Evaluation and Standardization
Fort Rucker, AL

The Directorate of Evaluation and Standardization (DES) is committed to providing relevant tools and information regarding aviation training and standardization to you, the combat aviator. To accomplish this task we have developed new initiatives and revised our focus. Our new mission statement and intent, outlined below, form the foundation for all of our efforts.

Mission

DES executes assistance and analysis for aviation units and training programs worldwide for the Commanding General (CG), U.S. Army Aviation Center (USAAVNC), in order to achieve standardization and expertise in relevant tactics, techniques, and procedures (TTPs).

Intent

DES' purpose is to provide relevant tools and information regarding aviation training and standardization to the combat aviator. DES accomplishes this by establishing real-time links between warfighting units and the USAAVNC, and by carrying relevant tools to the aviation commander to enhance training programs and end-user success. On order, DES collaborates subject matter expertise within aviation doctrine, training, and fielding agencies to enhance aviation products worldwide. The end state is a dynamic aviation assistance program that achieves the goals of the CG, USAAVNC, and ensures aviation standardization enhancement is achieved. This change in focus has many implications for you as the end user in Army Aviation. We'd like to address these changes here and how they can benefit your aircrew training programs (ATPs).

Concept of operation

In order to effectively execute our new mission and intent, changes had to be made to DES' evaluation techniques. Quite frankly, our feedback from the aviation community indicated past evaluations often conflicted with and detracted from normal unit training and operations. Our focus, in place of these evaluations, is now a concept of unit assistance visits. The intent behind these visits, scheduled at your request and on your timeframe, is to bring the complete set of aviation training tools to your door.

A simple metaphor to explain this concept would be a workshop. Each aviation unit has a particular workshop that has a variety of tools necessary to complete their mission. During previous evaluations, DES would examine your workshop and identify which tools were broken or missing.

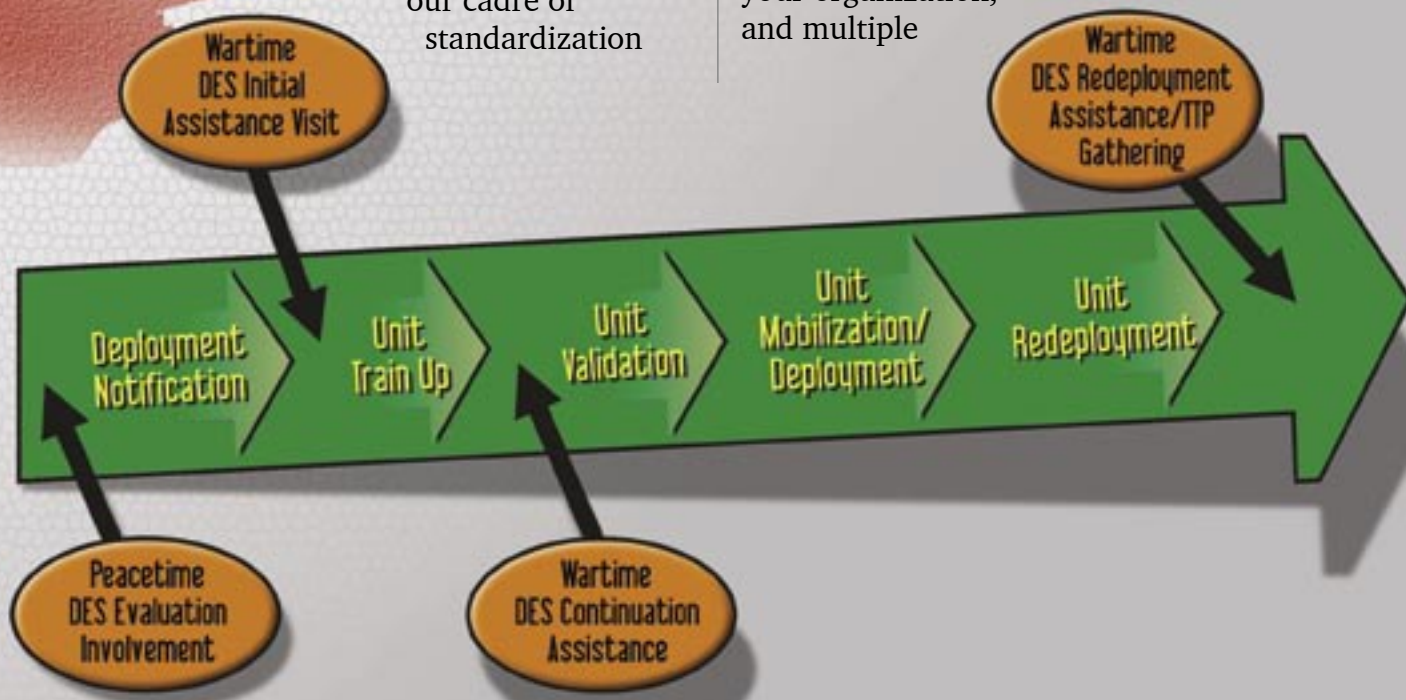
Our focus now is not only examining your workshop, but also bringing a full complement of tools to your organization and completing your toolkits with relevant, real-time equipment pertinent to your particular mission. We intend to do this by collaborating subject matter expertise and relevant experience from multiple centers of aviation doctrine, training, and development. As we continue to develop our cadre of standardization

pilots, you will see experts in aircraft survivability equipment (ASE), tactical operations, power management, aviation gunnery, environmental training, aviation mission planning, and other vital, relevant functional-area experts. If you have an aviation need that falls outside our normal areas of expertise, we'll enlist the aid of other organizations such as the Center for Army Lessons Learned (CALL), the combined training centers (CTCs), and the U.S. Army Safety Center (USASC). To illustrate these changes, let us review a typical unit assistance case using the new methodology.

Unit assistance

The first, and probably most significant, enhancement to DES' concept of operations is the absence of scheduled unit evaluations. Since we are a Nation at war, deploying aviation units need more than a visit every 18 to 24 months to evaluate aviation standardization programs. Therefore, the number one priority for unit standardization and training assistance is the deploying aviation unit. The diagram below represents how DES can fit this assistance in a typical deployment cycle.

These visits can last various amounts of time depending on the particular needs of your organization, and multiple



visits to the same organization could become more common. Additionally, the visit will be markedly different than DES evaluations you have received in the past.

Assessment

First, the needs of your unit will be assessed by the requesting command and our subject matter experts (SMEs). This will determine the general needs for training and standardization functional areas. Several enhanced functional areas have been added to increase DES' overall effectiveness. Previous functional areas are compared to the new enhanced functional areas below:

| Previous Functional Areas | Enhanced Functional Areas |
|--|---|
| SOP Review | Lessons Learned and TTP from Redeployed Units |
| ATP, ATM, and Tactical Training Implementation | Mission Planning and Execution |
| IATF and IFRF Review | Power Management and Environmental Training |
| Night Vision Devices | Aircraft Survivability |
| Aviation Maintenance (Preflight) and Armament | Equipment Training |
| Additional Training Requirements | Advanced and Tactical Area Gunnery, Running and Diving Fire |
| Operational Risk Management | TTP (Master Gunner Integration) |
| Individual and Crew Proficiency Evaluations | Multi-ship Operations |
| | Internal and External Load Operations |
| | CALL, CTCs, TacOps, and SERE SME Integration |
| | Academic Training for Identified Areas |
| | UAV Standardization |
| | Flight Maneuvering Handbook |
| | RAID and Fixed-Wing Operations |

Many of the enhanced functional areas are familiar to you already, but we've added some significant areas of emphasis that have become very relevant in today's deployment environment. DES will still analyze and assist in the previous functional areas as well, since these are definite indicators and requirements for sound aviation operations.

Assistance package

After your command has assessed functional area needs, our team can begin preparing and coordinating the appropriate assistance package. Once we arrive, there will be a short analysis phase where we review the functional

area needs and basically "examine your workshop." This will include the normal questions and reviews you've come to expect during a DES or Aviation Resource Management Survey (ARMS) visit, but focused towards a different end. Rather than issue you a grade on the content and completeness of your workshop, we will utilize this information to determine where and how to continue our assistance and tool sharing. It is similar to a proficiency flight evaluation, where the end goal is not a SAT or UNSAT grade, but rather a basis for continuation in the training program.

After this short analysis phase, DES personnel will begin working with individuals and the command to enhance their training programs, pass new and pertinent information, and collaborate aviation training and lessons learned from the myriad of aviation proponents throughout our community. This phase of the assistance visit will vary in length and is designed to provide the command and standardization personnel with every tool possible to benefit your aircrew training program. Following this visit, your unit can coordinate for follow-on assistance from our

teams, whether it is the entire team or unique SMEs who can provide additional individual assistance.

After deploying units return home, there are again unique and challenging standardization and training events that need focus. We'd like to be involved continually in this process as your unit redeploys for two reasons. First, our assistance can help your command address common questions and training issues that arise from the waivers and extensions you've encountered during the deployment. Additionally, numerous personnel changes and aircraft reconditioning programs can delay and detract from your ATP. DES can again bring personnel who recently have seen these issues to help restructure your standardization and training programs and get aviation units quickly back to full operations.

Secondly, your unit will have unique and valuable perspectives of what you encountered during the deployment. These relevant topics are highly sought after by other units we'll be assisting in their deployment phases, so again DES can provide a collaboration of efforts and ideas throughout the spectrum of aviation deployment operations. We'd like to help put all the pieces together, from the front-line warfighting aviation units to the aviation proponents and directorates, then back to the schoolhouse itself, in order to enhance the aviation product and procedures we currently work under.

The bottom line is this: *if your aviation unit has a training or standardization need, we will assemble and deploy the package to you in a timeframe that allows you successful mission accomplishment in today's contemporary operating environments.*

End state

The end state of this enhanced focus is a relevant and ready aviation force, working with progressive doctrine and tactics, which combines the best Soldiers with viable aviation products that meet the needs of the tactical force.

That being said, DES needs your help in achieving this goal. *Number one*, we must

know what you need. We will task-organize our teams to fit your schedules and your requirements, all on our dime. In the purest sense of the words, we are here to help. Let us know when, where, and how we can provide standardization training and assistance to your units. *Number two*, we might ask your Soldiers to travel with us. There is no one more recent or experienced in the aviation arena than those who have just come out of a deployment. One unit's assistance might require subject matter expertise we do not have, and we will need to get experts from the field to help future units prepare for these deployments. *Number three*, do not let standards drop as a trade-off of this change in focus. One difficulty the aviation community will continue to experience is a lack of training time and focus. With the spectre of DES coming to evaluate your unit now gone, standardization emphasis and training has the potential to decline. This potential decline in standardization administration will only lead to longer deployment preparations, difficulty during DES assistance visits, and a decrease in overall aviation safety. Remember, we still must "examine your workshop," and if the basics of your workshop are not in order, very little time for the advanced "tools" will be available during these critical preparation phases of training.

Summary

The mission of DES is clear. We are here to assist the aviation community by establishing and collaborating standardization expertise and relevant TTPs. We intend to establish real-time links between the warfighting units and the USAAVNC, carrying relevant tools to the aviation commander and enhancing your battlefield success. We will combine aviation-wide subject matter expertise within aviation doctrine, training, and field agencies to enhance aviation products worldwide. It's a large mandate, but we're up to the task. Let us know how we can involve you. ♦

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Commander's Task List: the other option

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Properly preparing and maintaining the Commander's Task List (CTL) within the Individual Aircrew Training Folder (IATF) can be a daunting task, especially in today's aviation environment. Highly experienced CW4 standardization instructor pilots (SPs) and instructor pilots (IPs) at the company level are very difficult to find these days. More often than not, the SP is a mid-grade CW3 and the IP is a CW2. During deployments, units might find themselves separated from their parent unit and unable to confer with that senior CW4 SP at the battalion level.

Additionally, the standards section could find itself short on help and with records in need of care. Some might opt for the easy solution and create a cookie-cutter CTL with "Base Task Requirements per ATM" marked on the CTL. Training Circular (TC) 1-210 states that an "X" in this box shows that the crewmember must comply with the minimum applicable base task performance and evaluation requirements specified in the appropriate aircrew training manual (ATM).

If this block is marked, you don't have to list base tasks or iteration requirements on the form. The IP or SP also is indicating that one iteration is sufficient for this individual aviator to maintain his proficiency. That's one iteration for the entire year! I don't know many crewmembers that maintain proficiency based on one iteration for the year.

Although this method is as easy as marking an "X" and a simple method of completing the CTL, it's not a method that creates proficient pilots. When the instructor briefs the crewmember that he's required to complete just one iteration for all base tasks during the coming year, the crewmember will perceive that his proficiency meets unit requirements.

The other option some people consider is placing an "X" in "Base Task Requirements Detailed Below" and listing all the tasks. When using this method, you have two options for listing base task requirements. In option (a), you may list all base tasks along with the appropriate iteration

and evaluation requirements. This might seem unnecessary and time consuming for some experienced aviators. After all, IPs and experienced pilots in command (PCs) are going to fly more than other crewmembers. They also will perform more iterations of hovering flight than we care to document.

The second option is a simple, yet overlooked, method that can be used to develop proficient crews. I refer to this as option (b) since it's listed as subparagraph (b) in TC 1-210, paragraph 3-15b(4). With option (b), the IP would place an "X" in the "Base Task Requirements Detailed Below." This allows the IP to then list only those base tasks for which additional iteration or evaluation requirements have been established. In this case, you must include a statement in the remarks section: "The remaining base task requirements are as specified in the appropriate ATM." For this option, if an 800-hour CH-47 PC has minor difficulties and is reluctant to perform Task 1082, "Precision Approach"; Task 1029, "Roll-On Landings"; and Task 1060, "Flight with AFCS Off," the IP can list just these 1000-series tasks on the DA 7120-1. Along with the tasks, the IP will annotate the appropriate number of iterations the instructor believes will assist the crewmember in maintaining proficiency.

As the preface of TC 1-210 states, the recordkeeping system is designed to reduce the administrative workload of unit standardization personnel. It is a document that provides guidance in developing a crewmember's continuation training by highlighting the crewmember's weaknesses and maintaining proficiency. But let's not forget TC 1-210 also provides guidance for tailoring training to meet the individual, crew, and unit needs based on the Mission Essential Task List (METL). Tailoring base task iteration requirements to meet individual needs in order to ensure the unit's mission success is critical. Don't sacrifice the crewmember's proficiency and training needs for the ease of recordkeeping. ♦

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UH-60 Submerged Boost Pump

There is some confusion in the field as to when or if the submerged fuel boost pumps are required to be **ON** or **OFF** to properly complete the UH-60 health indicator test (HIT).

First, some background. There was a time when the submerged fuel boost pumps weren't even installed on the aircraft. The pumps were added following several incidences of engine flameout believed to be caused by the vaporization of JP-4 in the fuel lines. They were required to be **ON** to maintain pressure and ensure the fuel stayed in a liquid state in the fuel lines during certain ambient temperatures. It also was believed that changing the fuel to JP-8 would help. However, these measures did not fix the problem.

The flameouts were later found to be caused by the fuel lines themselves and the way they were routed to the engines. A modification was applied to the fuel lines, but not all aircraft were immediately fitted with the modification, which also lacked engineering confidence. Because of these factors, it was decided that the requirement to turn the submerged fuel boost pumps **ON** before flight would be maintained. The requirement to not turn the pumps **ON** before the HIT check was a conscious decision that allowed engineers to collect engine reliability data without the pumps operating. Also, the aircraft most likely wouldn't have yet left the ground.

So now to answer the question heard so often from the field: "If I have to fly the aircraft out of parking to another spot to perform the HIT, do I turn the submerged fuel boost pumps **ON**, and then should I turn them **OFF** prior to performing the HIT?"

The answer is that you follow the order of the checklist and turn the pumps **ON** before takeoff. Since the engines are allowed to run on their own without the pumps, engineers can gather the necessary data indirectly. And, once you've repositioned, there's no need to turn the pumps **OFF** before performing the HIT. The submerged fuel boost pumps have **absolutely nothing** to do with the task. Now go fly!

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Remote Altimeter Setting Source

According to FAA 7110.65, Air Traffic Controller Handbook, and FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), the destination altimeter setting, whether from a local or remote source, is the setting upon which an instrument approach is predicated. You must have a current altimeter setting to execute an instrument approach.

Current altimeter sources are Air Traffic Control (ATC); a Remote Altimeter Setting Source (RASS) given by an approach controller as reported from an airport other than the destination; a Fixed Base Operator (FBO); or an automatic reporting system such as the Automatic Terminal Information Service (ATIS), Automated Surface Observing System (ASOS), or Automated Weather Observing System (AWOS).

The U.S. Army Aeronautical Services Agency (USAASA) determined that if the ASOS or AWOS is noticed to airmen (NOTAM) out-of-service and no RASS is published, you can still file a flight plan as long as the descent from en route minimum altitude for instrument flight rules (IFR) operation, approach, and landing can be made in visual flight rules (VFR) conditions. You cannot file if the destination weather is IFR because the destination altimeter setting, whether from a local or an authorized remote source, is not available.

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Standardization Communications (STACOMs) are prepared by the Directorate of Evaluation and Standardization, USAAVNC, Fort Rucker, AL 36362-5208, DSN 558-2603/3589. Information published in STACOMs could precede formal staffing and distribution of Department of the Army official policy. Information is provided to enhance aviation operations and training support.

Aviation Door Gunnery



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Aviation door gunnery has become a hot issue lately. Many leaders and aviation standardization people don't have a good understanding of the Army's annual door gunnery training program. Even if you're not "in the know," you can develop and conduct a successful aviation door gunnery program.

Did you know you could supplement your unit with non-flight personnel from outside units? Army Regulation (AR) 600-106, *Flying Status for Non-rated Army Aviation Personnel*, paragraph 4-32c, allows "Those organizations with assigned UH-1/UH-60 aircraft and no documented target alert and data display set (TAADS) door gunner positions may place Soldiers

on crewmember flying status as the second door gunner *once the unit is deployed in an imminent danger/hostile fire area.*"

These Soldiers can come from anywhere inside or outside the unit. If you have additional Soldiers available in a deployed environment, you can assign them to fly in place of one of your crew chiefs as a non-rated crewmember. This would place them in a paid flying position, meaning they would draw flight pay. The relieved crew chief could then perform maintenance or meet crew rest requirements before the next mission.

If you plan on using this method, carefully read the italicized portion above where it says, "...*once the unit is deployed in an imminent danger/hostile fire area.*" Simply put, you can't train the Soldiers or compensate

them for flight pay *until* you're deployed. With that in mind, you can request a waiver to this requirement upon notification of deployment. Training for these non-flyers can begin when the waiver is approved.

As a prerequisite, non-rated crewmembers must satisfactorily pass a Class III flight physical per AR 40-510, *Standards of Medical Service*. In addition, the individual must be selected by the commander for the duties to be performed and placed on flight status in accordance with (IAW) Training Circular (TC) 1-210, *Aircrew Training Program Commander's Guide to Individual and Crew Standardization*, paragraph 3-3c(2)(b).

TC 1-210 states that non-rated crewmembers must be trained to perform their duties IAW the appropriate aircrew

training manual (ATM). Required individual training includes aircraft qualification, aircrew coordination, gunnery, and if required, night vision goggles (NVGs). An Individual Flight Records Folder and an Individual Aircrew Training Folder also must be created for each crewmember.

The individuals selected for door gunnery must receive all the training normally given to a crew chief, since they are considered non-rated crewmembers. This includes all the minimum flight time requirements for aircraft qualification, NVG qualification, and aircrew coordination per TC 1-210, TC 1-212, and the Aircrew Coordination Course (ACC). Upon completion of the aircraft qualification and ACC requirements, the door gunner begins actual gunnery training.

The Commander's Task List for these Soldiers must include all the base (1000-series) tasks listed in the ATM. Mission training consists of those tasks selected by the commander that best meet the unit's Mission Essential Task List (METL) for that position. They don't have to learn every mission task the regular

crew chief performs, just the ones they'll be expected to participate in as a door gunner (multi-ship, external loads, etc.).

Continuation training also applies. This means readiness levels, annual proficiency and readiness tests, and annual flying hour requirements. Additionally, any supplementary training requirements from TC 1-210 such as nuclear, biological, and chemical (NBC) training; environmental training; fratricide prevention; and everything else the unit normally trains must be completed. The goal here is to create a fully functional crewmember. Skimp on the training and you create a liability.

The individual performing gunnery duties also can be awarded the Aircraft Crewmember Badge IAW AR 600-8-22. All they must do for a permanent award is participate on flight status, remain physically qualified, and serve not less than 12 months. They also can receive the award if the additional provisions in AR 600-8-22 are met: complete 15 combat missions under probable exposure to enemy fire, become incapacitated for

further flight duty by reason of being wounded in action, or be injured as the result of an aircraft accident. For the temporary award, the Soldier must be performing gunner duties, and the aviation unit commander must publish orders for the wear of the badge. This is a great incentive for Infantry units and commanders to allow their Soldiers the opportunity to help crew aircraft.

This is a program that can be used by the aviation command structure to greatly enhance their ability to go to war. The keys here are the early identification of gunner candidates and having a plan in place to begin training. You could find yourself unprepared for demands on personnel and resources if you wait until your unit deploys overseas. By then it might be too late. ♦

Editor's note: *This information regarding door gunnery is focused on UH-60 crewmembers, but also applies to CH-47 personnel. CH-47 crewmembers should be trained similarly, with reference to the CH-47 ATM regarding academic and flight task requirements.*

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For more information regarding UH-60, UH-1, or CH-47 door gunnery training and programs, please contact SFC Brad Kitch, DES, DSN 558-1748, or SFC Sean Dunn, DES, DSN 558-1439. For those of you who don't know, Fort Rucker has a new Gunnery Branch at the Directorate of Training, Doctrine, and Simulation. For more info concerning the new Gunnery Branch, contact SSG Richard Graves, DSN 558-1897 (334-255-1897) or e-mail richard.graves@rucker.army.mil.



When the Minimums Become the Maximums

CW5 Larry Gauthier
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When I started flying, our unit's hour requirement to become an aircraft commander (AC) was 500 hours of first-pilot time. Back then, we logged time as first pilot and copilot versus pilot-in-command (PC) and pilot (PI). When I became an AC, I had over 700 hours of total flight time, so I was fairly well prepared for my new duty designation. The experience level dropped as the unit lost their Vietnam aviators to retirement, so they kept lowering the hour requirement for one to become today's PC.

So what's my point? Commanders tell me that today's aviators are not as experienced as the old. I agree with that statement. Compared to today's pilots, I had much more flight experience before I was placed in charge of the aircraft.

With training dollars cut and the operating

tempo (OPTEMPO) increased, commanders look for ways to meet training requirements as soon as possible to have functioning pilots. I had the luxury of the "fat" training years during my formative aviation growth. But, are commanders really making the most of the training time allotted them?

When I hear conversations like the following between the commander and instructor pilot (IP), I don't think those commanders are seeing the forest for the trees.

(IP): "Sir, John's goggle flight tonight wasn't as good as I would like to see and I think..."

(Commander): "Did he meet the standard?"

(IP): "Well, kind of, but it wasn't pretty and I think..."

(Commander): "Since when is pretty a standard? Does he have the minimum hours?"

(IP): “Yes, but...”

(Commander): “Put him in Readiness Level (RL) 1. I need him to fly a mission tonight.”

How many pilots think they don’t have to fly any more during their semiannual period once they’ve completed their minimum flight hour requirements? Did this thought process originate from observations during their night vision goggle (NVG) aircraft qualification or refresher training? The training guide (figure 4-2) in Training Circular (TC) 1-210, *Aircrew Training Program Commander’s Guide to Individual and Crew Standardization*, recommends 8 hours of total time, but has a note that states: “The total time, excluding the SFTS or static aircraft training period, may be reduced to no less than 4.5 hours based on the IP’s or standardization instructor pilot’s (SP’s) recommendation concerning the aviator’s proficiency.”

After careful review of hundreds of training records during Directorate of Evaluation and Standardization (DES) evaluation and assistance visits, I have discovered that we have lots of very proficient NVG pilots, because most have progressed in only 4.5 hours of NVG time entered on DA Form 7122-R. Maybe this notation originated even earlier during their aviation career. Maybe it was in flight school, when the IP put the student up for his check ride because he had the minimum hours and another class was starting. Maybe it happened when his check ride performance was less than desired, but he met the minimum standards (and another class was starting), so he was passed and sent to his new unit. His unit IP wasn’t satisfied with his proficiency flight evaluation, so he was put through RL progression, again with minimal flight time. Then, a short time later, “John” rolled the aircraft over during an NVG landing with blowing dust.

Who was at fault? The new pilot? The IP for not giving him adequate training? The commander for putting pressure on the IP to advance the pilot? Let’s look at how this individual was trained at his unit.

What guidance did the commander give his IP as to how he wanted his aviators trained? The commander sets the tone for his unit’s proficiency by the way he develops his Commander’s Task List (CTL) for each position. Figure 3-1 of TC 1-210 guides the commander into selecting all base tasks as indicated in the appropriate aircrew training manual (ATM); selecting the applicable mission tasks; developing any additional tasks; and specifying the modes of flight (day, night, NVG, or nuclear, biological, chemical [NBC]) and the number of iterations to be performed in each mode.

Ideally, the commander and SP sit down together after reviewing the unit METL and discuss each task that was selected. For this discussion, we will look at some of the base tasks listed in TC 1-212 (UH-60).

(IP): “Sir, perform slope operations...in what modes do you want your pilots to be proficient?”

(Commander): “I want them to be able to do slopes in day, night, and NVG modes.”

(IP): “But sir, shouldn’t we also select NBC?”

(Commander): “Why? It’s not marked in Figure 5-1.”

(IP): “For two reasons, sir. One, I don’t think we will always be landing on level terrain when we are conducting NBC operations. Two, that table falls under the continuation training chapter. Don’t confuse annual task and iteration requirements with that of developing a task list or RL progression. Remember, RL progression requires pilots to demonstrate proficiency in each mode of flight required by the ATM and the CTL we’re developing right now.”

(Commander): “Good point!”

(IP): “Sir, what about perform simulated engine failure at a hover?”

(Commander): “I see the ATM just has an ‘X’ under the day column.”

(IP): “No sir, that isn’t the day column. It’s the column that shows which tasks are mandatory for a standardization flight evaluation, which could be completed during day, night, night NVG, or NBC modes. Don’t

you think our pilots should be able to perform that task in all modes, sir?"

(Commander): "Yes, I do. Put an 'X' in each block."

The commander and IP cover all tasks in this manner. The thought process is that the new aviator will demonstrate proficiency in each task and in each mode to an IP before being released to the unsuspecting (or suspecting) PC.

The majority of aviation commanders and IPs view the blocks marked "X" under the night column as the **only** tasks that need to be trained. Yes, those tasks need to be trained, but they are not the only ones! They are the **MINIMUM** tasks determined to be different enough under night conditions that need to be completed at least once during continuation training, not RL progression training (remember, there are separate requirements for each).

I hear comments like, "Sure, that's the ideal thing, but we don't have the time to train all modes." Time should not be an issue. If the commander's evaluation determined he should be placed in RL 3, he probably needs more than a couple hours' training to demonstrate proficiency in base tasks. Schedule day out and night returns—you'll be able to evaluate base tasks in day and night modes very efficiently.

Don't forget the instrument maneuvers. If your new pilot is a UH-1 pilot, he learned to do instrument takeoffs from the ground with the hood on. Many hovered out with the hood in place and tilted their head back to see under it, using the skid shadow as a hover height reference. The first thing they realized in night instrument flight (as they bounced off the black pavement) was that visual references are limited with the hood on. The second thing they discovered is that due to age, they now need glasses to read the approach chart. Isn't it

nice they discovered their visual acuity problem with an IP versus an unsuspecting PC on a night instrument meteorological conditions (IMC) flight! I think it will be hard to find anyone that says the pucker factor is the same whether you are flying day IMC or night IMC.

What's the point of training a pilot? Is it just to put a check mark in the block of another

requirement, or is it to keep our crew and passengers safe during mission accomplishment? Do we take the fast, **MINIMUM** way out and mark, "Base Tasks per ATM," which means that task was performed once in any mode authorized by the ATM or commander? Or do we select appropriate iterations for the proficiency of that aviator? Do you ever wonder what the proficiency difference is between an SP and a PI? Apparently none, because they both usually have "Base Tasks per ATM" checked.

What do you think, commanders and IPs? Is just meeting the **MINIMUM** requirements specified in the

ATM satisfactory?

Most IPs I know care about their pilots' proficiency. They pray that none of the pilots they've just evaluated (and determined satisfactory) ever crash. If that happens, they'll lie awake at night thinking, "What went wrong? Was there something I missed? Did I fall into the trap of passing a pilot because I knew he'd done better and maybe it was just an off night? How can I stand in front of his wife and kids and justify why Mom or Dad is not coming home tonight? Will saying, 'I gave him the **MINIMUM** time' or 'There wasn't an 'X' in the box' help anyone sleep at night?"

Hopefully this will get you thinking about the quality of your aircrew training program. If it doesn't, it should. ♦

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Investigators' Forum

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

Aviation Maintenance Can Be Deadly

MAJ Ray Jenkins
U.S. Army Safety Center

Army Aviation would cease to exist without highly trained and qualified maintainers. It is the duty and responsibility of every leader and supervisor to ensure all maintainers are trained, qualified, and equipped properly. Most maintenance programs are considered mundane and uneventful, and aviation maintenance is no exception. This doesn't mean the job is unimportant; in fact, most aircraft maintainers don't get hard-earned and deserved recognition. However, the importance of doing the right thing and being safe while working on and around Army aircraft sometimes takes a back seat to mission accomplishment.

Several accidents stemming from the "simple" procedure of inflating tires on Army aircraft have occurred over the past few years. Since 1990, there have been five accidents and two fatalities between the Army and the Navy involving aircraft tire or wheel explosions. This seemingly simple maintenance practice has become

one of the deadliest examples of failing to adhere to standards and published procedures and not using the proper equipment.

Some Army aircraft tires are filled with nitrogen. Nitrogen is more stable than compressed air and is inert (does not support combustion). Compressed air contains about 15 to 20 percent oxygen, which makes it more volatile.

There have been documented cases of crashes caused by tires exploding in flight, which is why nitrogen is used to fill tires on military and commercial aircraft. However, even nitrogen tires can react violently. The destruction and devastation that occur when someone over-inflates an aircraft tire is hard to describe, but very much a reality. One such accident occurred recently in Iraq.

A sergeant and a specialist were replacing and servicing a tire on a UH-60 during a 500-hour phase. The specialist was removing and replacing the tire assembly, with the sergeant supervising. After installing and torquing the new wheel assembly, the specialist began lowering the

aircraft. The sergeant decided the tire needed more pressure, so the specialist jacked the aircraft back up.

The sergeant went to the tool room, got the nitrogen cart, and pulled it to the aircraft's side, about 3 feet from the tire. The sergeant noticed the cart's low-pressure side couldn't be used because it didn't have the proper fittings. In addition, the tool room didn't have a tire inflation kit, which has a built-in tire gauge and an over-pressurization valve that prevents the tire from being over-inflated. The sergeant told the phase team supervisor that the cart's low-pressure side didn't work and that there was no tire inflation kit available.

The phase team supervisor asked the sergeant if he'd ever filled a tire from the cart's high-pressure side without using a tire inflation kit. The sergeant said he had lots of times, so the supervisor told him to add a little nitrogen at a time and then check the tire pressure.

The sergeant attached the high-pressure side hose to the tire and opened the valve on the high-

pressure side bottle. He then was supposed to close the valve and check the pressure. The sergeant closed the valve completely, but the tire exploded when he leaned over to check the pressure.

The explosive force was so great that it tore the horizontal strut out of the airframe at the attachment point and drove the vertical strut back into the fuselage about 12 inches. The inside part of the wheel that hit the strut continued under the aircraft and ricocheted off the wall 30 feet from the aircraft. That's the destruction part.

As the wheel left the spindle, it severed the sergeant's arms above the elbow. It then struck the specialist in the lower torso, killing him instantly and forcing his body 19 feet from the aircraft. That's the devastation part—one Soldier permanently injured and another Soldier killed. These Soldiers were lost because the standards weren't enforced and the wrong equipment was used.

Performing maintenance has inherent hazards, just like any other aviation operation or combat. To lose a Soldier in combat is a hard pill to swallow. You want to believe he was highly trained, highly skilled, and highly motivated, and doing the right thing. To lose a Soldier to a non-combat accident is a loss we just can't afford.

It is the ultimate responsibility of every leader, supervisor, and Soldier to ensure that realistic training and adherence to standards are the only ways we do business. The cost of not doing it the right way is just too much to pay. ♦

—MAJ Ray Jenkins, Aviation Systems and Accident Investigation Division, U.S. Army Safety Center, DSN 558-9853 (334-255-9853), e-mail ray.jenkins@safetycenter.army.mil

Train as you fight." Those words are a foundation of schoolhouse teaching in Army Aviation. Recent operations in Southwest Asia have illustrated the need for tough, realistic training, especially in the desert environment. In Fiscal Year 2003 alone, brownout or whiteout contributed to 12 Class A accidents, nearly 40 percent of the total Class A accidents for that year.

The Army has the perfect training environment for desert operations at the National Training Center (NTC) in Fort Irwin, CA. Aviation units that rotate to the NTC each year get the opportunity to experience actual brownout conditions in their own aircraft. The rotations offer real-world scenarios that prove invaluable in the Iraqi or Afghan deserts. But what about units that don't rotate to the NTC, or new aviators that don't get the chance for hands-on training before they deploy?

Fighting Brownout with SIMULATED

Julie Shelley
Staff Editor

FlightSafety International in Fort Rucker (Daleville), AL, might have the answer.

FlightSafety, a commercial aviation training company, recently unveiled a new simulator that is sure to set the bar for future Army Aviation simulation training. Using the latest technology to bring photo and satellite images to life, their UH-60 Black Hawk simulator offers the next-best thing to actually being at the NTC or Baghdad. Paul Garritson, FlightSafety's UH-60 Programs Director at the Daleville center, said the sharp increase in brownout-related aviation accidents led to the development of the brownout model in the advanced simulator.

"FlightSafety saw brownout conditions as an area that needed simulation training to help reduce the accident rate and save lives," he said. "This simulation is going to help save lives and equipment, as well as enhance our warfighting capabilities. Advanced simulation can reduce aircraft training time by as much as 40 percent or more and provide a more qualified pilot to the field upon graduation from flight school."

Once a pilot steps into the simulator, he or she will be in familiar surroundings. The cockpit is an exact copy of the Black Hawk, and has two extra seats behind the pilots' station for the instructor/operator and an observer. The real fun starts, though, when the flying begins.

The graphics are so realistic you'll see the "silver side" of leaves when you hover close to trees. Water sprays up and ripples from rotor wash when the aircraft hovers over a pond. Smoke from a simulated battle momentarily turns the area a hazy black as you fly over and through it.

And that's just the Fort Rucker database. With the touch of a button, you can be transported to the NTC or Iraq. The brownout conditions the NTC is famous for are replicated using color satellite images and three-dimensional technology. As you land at the NTC's Bicycle Lake, the aircraft's rotors churn up light to heavy dust conditions.

The ground is completely obscured, and it's up to you to make sure you don't crash. Press another button and you're in Baghdad, hovering over the city. The Tigris River is in plain view, and the contrast between

city and desert is apparent.

The simulator is a design concept for assisting Fort Rucker with its mission of qualifying aviators in the Black Hawk. Mike Mulvenon, FlightSafety's Business Development Manager for Army Programs, said the Fort Rucker facility was the obvious choice for the simulator's home.

"The Daleville center supports the Army's C-12 fixed-wing training program. We got involved several years ago with this initiative to support Army Aviation at Fort Rucker," he explained. "The Army was lacking simulation support in their flight school. We got into the Black Hawk and put it here to show the Army our capabilities and, in that process, build a digital database to replicate all the Fort Rucker flying area, as well as to build two additional databases: one to support brownout or desert-type operations, and the other to support mountain-type operations."

The UH-60 simulator will be joined in the future by comparable simulators for all airframes to support Flight School XXI. Those will be housed in a building next door to the current Daleville facility, just a few miles from the Fort Rucker post. The value of the advanced training will reach far beyond just brownouts.

For example, emergency procedures iterations that are too risky to perform in an actual aircraft can be repeated safely in a simulator. FlightSafety's simulator has a debriefing capability so pilots and instructors can go over every detail of each flight and pinpoint strengths and weaknesses. When the new building is completed, the simulators will be linked together for collective crew and aircrew coordination training.

"It will improve every aspect of aircrew coordination training, especially with the technology we have as well as the debriefing capability," Mr. Mulvenon said. "We'll show the crew where they're not communicating or using the right terminology to get their points across, which helps improve standardization and safety."

"We're still a work in progress, but we're at the stage now where we can safely and adequately do a complete training program evaluation," he said, adding that over-water and shipboard helicopter operations modules are in development. "It's going to be improved even more as we continue to expand this database."

For more information on the UH-60 simulator, contact Mr. Garritson at paul.garritson@flightsafety.com or Mr. Mulvenon at mike.mulvenon@flightsafety.com. ♦

Editor's Note: Tomorrow's aviators will benefit from today's technology like never before. Continue to look for other brownout training initiatives in the coming issues of *Flightfax*.

—Julie Shelley, Staff Editor, *Flightfax*, U.S. Army Safety Center, DSN 558-1218 (334-255-1218), e-mail julie.shelley@safetycenter.army.mil

WAR Stories

There I was...



If It'll Fit, It'll Fly!

CW4 Kim Randall
Wisconsin Army National Guard

Every person who flies Army aircraft will at some point ask themselves, *"Do I have what it takes to deal with that 'Oh shoot!' situation when it happens?"* Some people might go their whole flying career without answering that question, but most of us will someday have a *"There I was"* story to share with our fellow aviators. Sometimes these stories are in the spotlight for all to see; other times you'll only hear about them when you buy that old guy the next round. But they all have two things in common: they are all tales of how a crew came together to handle a critical situation and lived to fly again, and they all have lessons learned that can be passed on. In keeping with Army tradition, here is one of those stories.

Here's a little nugget of wisdom I'm afraid I will never forget, thanks to the teachings of one who should have known better. It was a hot summer day in the jungles of southern Wisconsin. I was a recently returned WO1, fresh from the halls of "Mother Rucker" and assigned to one of our senior, combat-experienced UH-1 pilots for the duration of this 3-day training exercise.

We had just flown in to hot refuel and drop off some troops and mermite containers for

the field site lunch. Did I mention it was hot? Our crew consisted of a well-seasoned crew chief (CE), our intrepid pilot in command (PC) who had "been there and done that" many times over (my hero of the day), and myself. We unloaded our cargo and passengers and hovered into position for a top-off at the fuel point.

After receiving our load, our PC noticed that our passengers and cargo were being loaded into the back of a 2½-ton for the ride to the encampment about 2 or 3 miles away. I guess



he felt sorry for them having to make that ride across rough terrain in the back of that truck on such a hot day. With a few gestures, he got their attention and had them come back over. Moments later the passengers, mermitees, weapons, and field gear were packed in the back of our now fully fueled aircraft. It was so packed there was cargo sitting in the passengers' laps, between their knees, and under the seats. It was so full our CE had to get out to make room.

Being the new guy, I was sure I didn't have to mention our potential (but obvious?) over-gross situation to this highly experienced and combat-trained veteran sitting next to me. But I did anyway.

Without so much as a backward glance, my hero said with a smile, "If it'll fit, it'll fly!"

Still not quite believing what I was seeing and hearing, I made one more meek attempt to suggest that "maybe" we should just recalculate our weight and balance to make sure. Nothing doing!

With a widening smile, he spoke the immortal words we've grown to know and regret in aviation: "Just watch this!"

The PC began adding power and had actually coaxed our steed to about a foot and a half off the ground when a slight crosswind gust weathervaned us, and our rotor RPM bled off. We settled abruptly with a thump, and I turned to start unloading our cargo, thinking that was the end of the adventure.

"No, leave them onboard!" he told me. At this point I was really stunned. "We're actually going to attempt this again?" I asked. "Yes! If it'll fit, it'll fly. You just have to know how to work it!"

So once again, awed by the pro and too new to make waves, I sat back and didn't say anything. Crew coordination—who needs it with so much experience at the controls? For the second time he wavered into the air,

actually making it to about 3 feet this time. Did I mention it was hot?

Now it got interesting. A gust hit us again, pushing us sideways and down. Our poor Huey was shuddering, lights were flashing, and our LOW RPM audio was wailing, but to my amazement the PC was still fighting the controls and trying to keep it flying.

I finally got my nerve back and yelled at him to just put it on the ground!

"I can't!" he yelled back. "We've drifted over the fuel point!"

Well, the temperature could have dropped 40 degrees and we still would have been sweating in the cockpit. The PC continued to nurse our faltering bird along at minimal RPM, trying not to drift into the tree line on one side or the fuel tanker on the other, and all the while attempting to keep from spearing the fuel point nozzle and grounding stake up through our belly.

All this took probably no more than 20 to 30 seconds, but it seemed like eternity. When we were finally clear of the last fuel hose, our warrior dropped us through the last foot and a half with a heavy thud.

After one deep breath, he half-smiled and said, "Ok, now we can unload the passengers." I wish I could say that was the only time I allowed another pilot to put me into such a compromising situation without a fight, but it's not. However, I'll save that story for another time. ♦

—CW4 Kim Randall, Aviation Safety/Logistics Officer, 1-147th Command Aviation Battalion, Wisconsin Army National Guard, Madison, WI. He can be reached at DSN 724-3896 (608-242-3896) or e-mail kim.randall@wi.ngb.army.mil.

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Parker Awards: Spotlighting Safety Excellence



Julie Shelley
Staff Editor

Accomplishing even the simplest mission safely is an achievement in our Army, especially for aviation units. In wartime, the challenge is even greater. Units that succeed in safety are recognized in several different ways, and Army Aviation is no exception. The LTG Ellis D. Parker Outstanding Unit Awards are presented annually at the U.S. Army Aviation Center in Fort Rucker, AL, and recognize excellence in leadership, training, maintenance, and safety. The following units were selected for their performance in Fiscal Year (FY) 2003, and some of their accomplishments are highlighted below.

Overall Winner and Combat Support Category Winner

9-101st Aviation Regiment Fort Campbell, KY

To say the 9th Battalion, 101st Aviation Regiment was busy in FY03 would be an understatement. In preparation for Operation Iraqi Freedom (OIF), the battalion executed a brigade field training exercise (FTX) and door gunnery, which included training Infantrymen as door gunners. The battalion's leadership also attended Exercise Victory Scrimmage in Heidelberg, Germany, to plan for the upcoming combat deployment. The preparation paid

off last winter when the battalion launched its aircraft and ground equipment from Jacksonville, FL, for the deserts of Southwest Asia.

In theater, the battalion executed reception, staging, onward movement, and integration (RSOI) while simultaneously planning and executing brigade air assaults. To support operations deep in the theater, the battalion established a forward area refueling point (FARP), the most forward and longest-running one in the division. The battalion's aviation unit maintenance company maintained an overall aircraft mission capable rate of 82 percent, a true accomplishment in the harsh Iraqi desert. ♦

Best Combat Battalion

**1-101st Aviation Regiment
Fort Campbell, KY**

War-time operations are far from easy, but some units and individuals seem to thrive in a combat environment. The 1st Battalion, 101st Aviation Regiment is an example. Deployed to support OIF in February 2003, the battalion flew all their AH-64Ds on several crucial missions and destroyed dozens of enemy vehicles and several weapons caches. In addition, the battalion's ground assault element convoyed their ground vehicles more than 925 miles without incident or accident.

Split more than 110 km between base locations, the battalion maintained a mission capable rate of 87 percent and flew 128 percent of its annual flying program. The battalion logged almost 2,800 incident-free combat hours and conducted more than 150 security, reconnaissance, quick reaction force, and raid missions in just a 4-month period in FY03. ♦

Best Combat Service Support Battalion

**421st Medical Evacuation Battalion
Wiesbaden Air Base, Germany**

The 421st Medical Evacuation Battalion flew all over the world—literally—in FY03. Every company was deployed in support of the Global War on Terrorism in such places as Kosovo, Afghanistan, Kuwait, and Iraq, to name just a few. The 421st's aircrews flew more than 8,600 hours without a Class A, B, or C accident, a true feat in combat.

The importance of the medical evacuation mission cannot be disputed. During FY03 alone, more than 4,000 injured Soldiers, Sailors, Marines, and civilians were transported to medical facilities by 421st crews.

The battalion accomplished their missions within the operating budget and achieved a mission capable rate of 97 percent for ground vehicles and 79 percent for aircraft. ♦

Best Table of Distribution and Allowances Battalion

**1-223rd Aviation Regiment
Fort Rucker, AL**

All Army pilots commence their flying careers at Fort Rucker, and it is here that their sense of safety is first developed. The 1st Battalion, 223rd Aviation Regiment sets the standard for student pilots in leadership, safety, training, and maintenance.

The battalion trained almost 2,400 student pilots in FY03, flying 15,988 accident- and incident-free hours in 18 different courses of instruction. The 1-223rd also validated CH-47 Flight School XXI requirements and implemented flight training transformation initiatives to positively impact the future of Army Aviation. ♦

BG Carl I. Hutton Memorial Award

**159th Aviation Brigade
Fort Campbell, KY**

The BG Carl I. Hutton Memorial Award is presented annually by the Order of Daedalians to units that demonstrate outstanding professionalism and make invaluable contributions to the advancement of flight safety in Army Aviation. The award was presented to the 159th Aviation Brigade for their accomplishments toward these goals.

Congratulations to these units! ♦

—Julie Shelley, Staff Editor, *Flightfax*, U.S. Army Safety Center, DSN 558-1218 (334) 255-1218, e-mail julie.shelley@safetycenter.army.mil

ACCIDENT BRIEFS

Information based on preliminary reports of aircraft accidents

AH-64



A Model

■ **Class B:** The crew was firing the fourth 10-round burst from the 30mm cannon when the gun barrel reportedly exploded. Shrapnel penetrated the fuselage, target acquisition and designation system (TADS), and the front of the cockpit. One main rotor blade also suffered damage. Neither crewmember was injured.

■ **Class E:** The auxiliary power unit (APU) failed suddenly during a maintenance operational check (MOC) of the aircraft systems after phase inspection. Further inspection revealed the APU shut down automatically after suffering internal foreign object damage (FOD).

EH-60



A Model

■ **Class E:** The #2 engine turbine gas temperature (TGT) indication went erratic during cruise flight. The aircraft landed without further incident. Maintenance replaced the panel indicator.

MH-47



E Model

■ **Class E:** While accelerating during initial takeoff for instrument flight rules (IFR) flight, the combining transmission

PRESSURE LOW light and MASTER CAUTION light illuminated, with 9 psi displayed on the power train page. All maintenance panel indications were normal. The crew landed the aircraft at the departure end of their runway without further incident, and indications in the cockpit returned to normal. However, when the crew departed the runway to return to the hangar, the low pressure indications returned. The crew landed and shut down the aircraft without further incident. A broken wire was found in the vicinity of an old splice on the combining transmission pressure transducer wire bundle.

OH-58



C Model

■ **Class E:** The MASTER CAUTION light illuminated while the aircraft was on the ground with the engines running. Maintenance replaced the starter generator.

■ **Class E:** Transmission oil splashed on the windscreen upon landing. The aircraft was shut down without further incident. Maintenance replaced the transmission.

■ **Class E:** During cruise flight the MASTER CAUTION light illuminated with no other segment lights. The aircraft landed without further incident. Maintenance replaced the caution panel.

■ Class E:

Transmission oil pressure maxed out during landing. The aircraft was shut down without further incident. Maintenance replaced the oil pressure gauge.

■ **Class E:** Upon landing, engine oil temperature exceeded 107 °C to 110 °C for less than 5 minutes. The aircraft was shut down without further incident. Maintenance replaced the oil pressure indicator.

D(R) Model

■ **Class E:** During maneuver operations urban training (MOUT) tactical training, the crew overtightened the mast in a left banking maneuver at approximately 30 knots. Mast torque on the full authority digital electronic control (FADEC) monitor displayed 126 for 2 seconds. No other limits were exceeded. The crew landed the aircraft at the nearest suitable location and reported the event to maintenance. Maintenance visually inspected the aircraft and found no damage. The aircraft was released for flight.

UH-60



A Model

■ **Class E:** While attempting to start the aircraft for a maintenance run-up, the crew started the APU and was about to start the #1 engine when the APU made a

loud banging noise and stopped. The advisory panel APU FAIL light illuminated. The crew found a piece of metal from inside the engine embedded in the APU's intake screen.

■ **Class E:** During startup the #2 engine experienced a fuel leak. The aircraft was shut down, and the mission was cancelled.

RC-12



P Model

■ **Class E:** The ALT WARNING light illuminated in flight at 140 knots after 20 minutes of elapsed mission time. The crew cross-checked the cabin altitude and noticed it was climbing. The crew then donned their oxygen masks and performed the emergency procedure. The aircraft descended to below 10,000 feet and returned to base for a maintenance checkout. Maintenance determined the pressure controller was faulty due to fair wear and tear and replaced it. A full MOC was completed with no faults discovered, and the aircraft was released for flight.

Editor's note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change. For more information on selected accident briefs, call DSN 558-9552 (334-255-9552) or DSN 558-3410 (334-255-3410).